Appin. No. 10/599,669 Amendment dated May 29, 2008 Reply to Office Action dated February 29, 2008

ABSTRACT OF THE DISCLOSURE

A rotary-piston engine comprises at least two rotary pistons, which are located in an essentially spherical housing and which rotate in common about a rotational axis running through the center of the housing, each of the rotary pistons comprising two pistons that are interconnected in a fixed manner, lie diametrically opposite the center of the housing and execute pivoting displacements back and forth in opposite directions about a pivoting axis running perpendicular to the rotational axis, during their rotation. To control the pivoting displacements, the engine is provided with loose spherical or ellipsoidal rotational bodies, which are rotatably mounted in the sliding surfaces of the pistons in respective guide sockets that are hemispherical or ellipsoidal and which engage in at least one guide groove that is configured in the housing. The groove has an essentially hemispherical or ellipsoidal profile.